

A DJ performing on stage with a crowd in the foreground. The DJ is wearing a white t-shirt and blue jeans, holding a microphone. The stage is lit with blue and white spotlights, and the crowd has their hands raised.

PRO

MOBILE

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Equipment Reviews

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This review is a timely first for Pro Mobile; while there have been many reviews of DJ mixers over the years, this is the first occasion that a live P.A. mixer has been featured. It is timely due to Dave Homer's pair of articles (in this issue and the previous edition) on 'Live Sound: Turning Your Mobile DJ System into a Live P.A. Rig'. Many DJs may already own speakers and amplifiers suitable for providing live PA in small to medium sized venues, but very few of us are likely to have a mixer with more than a couple of microphone inputs. Therefore, if we are to take Dave's advice and branch out into live sound, a mixing desk is likely to be high on our shopping list. Peavey's XR 1220 is a feature packed, yet portable, live sound mixer that also incorporates a 1200W Class-D power amp.

The front panel of the mixer is divided into two sections; the various faders, knobs and other controls are arranged across the larger lower portion, while the input and output connection sockets are located in the top portion. Weighing just 11.4Kgs - which is phenomenal considering the inbuilt amplifier - the unit has a solid metal construction finished with metallic grey power-coating. Chunky rubber feet are provided for tabletop operation and the front edge is curved to give comfort to wrists resting over the controls.

The XR 1220 has a total of 20 input channels; the first 18 are standard mono mic/line channels, while the final 2 can either be used for extra mono inputs or as stereo channels. While the mixer is compact, for such a high-

ly specified 20 channel unit, the controls do not feel as if they have been crammed in.

Each of the channels has a large level fader; these have an excellent smooth feel without being loose. Below the fader for each channel is a small push switch for selecting the audio source for pre-fade listening via the headphone output. An LED indicator beside each of these switches shows the user at a glance which channels are currently selected for monitoring. Above each level fader there is another pair of LED indicators, one green to indicate that a signal is present and another red that flashes on if the signal clips. Beside these LEDs there is also a push switch labelled 'mute', which disables the channel (both from the main mix and monitor / effect sends). The 'clip' LED doubles up as an indicator for the mute function, lighting continuously when a channel is muted.

Colour coding has been applied to the inevitable array of knobs, which I found helpful when it came to quickly finding a particular control for a specific channel. Working upwards from the level fader, the first knob is grey and provides a stereo pan control, allowing each audio source to be routed to the left output, right output or a variable combination of the two. Next up is an orange knob that controls the effects send. By default this routes the signal through the unit's internal effects processor, however an external effects unit or other processor can also be used. The effect send is 'post-fade', meaning the signal is taken before the chan-



nel fader so that adjustments made to the fader will also affect the effect send level.

Above the effect send control for each channel are a pair of maroon coloured knobs that allow the audio channel to be mixed into two separate monitor outputs for use with wedges or other on-stage monitoring systems. The monitor sends are 'pre-fade', which means they are independent of the level fader. In practical terms this means the level fader can be increased (thus increasing the volume of the particular input through the main P.A.) without affecting the on-stage monitor level.

The next set of knobs provide EQ control and are similar to those found on most DJ Mixers. These controls vary slightly between the first eighteen mono channels and the final two stereo channels. The stereo channels are provided with a basic three band EQ offering -15dB to +15dB of adjustment at each frequency (low, mid, hi). For the mono channels two knobs are provided for adjusting the mid range frequencies: Lo Mid and Hi Mid. The Hi Mid control utilises Peavey's patent pending MidMorph technology that cuts harshness or adds crispness to a sound signal. The EQ knobs are coloured dark blue, with the exception of the Hi MidMorph controls which are light blue. In addition to the EQ knobs each channel is equipped with a push switch that activates an 80Hz low-cut filter. Very few audio inputs have useful signals in the low bass frequencies below 80Hz, engaging this filter reduces unwanted low frequencies from the overall sound output and also reduces the drain on a PA system's amplifiers.

At the top of the control section for each channel there is a final black knob providing gain alteration. On the stereo channels a separate gain control is also provided for the extra line level (stereo) inputs. It is actually possible for both of these inputs to be active at the same time (effectively providing an extra two inputs) although they will obviously have to share the same EQ and other controls.

In the XR 1220's input section there are XLR sockets for each of the 20 channels, these are designed for balanced connections from

microphones, DI boxes and other low-level sources. The mixer can also provide 'Phantom Power' via these sockets should it be required by connected microphones. The first 18 channels also feature a pair of jack sockets, one of which allows mono unbalanced line level inputs to be connected, while the other provides an 'insert' point for the connection of an external signal processor such as a Compressor or Gate. The final two channels don't feature Insert connections. Instead channel 19 offers a stereo line input via a pair of 1/4" jack plugs and channel 20 also offers a stereo line input but this time via a choice of a stereo 1/8" jack plug or a pair of RCA sockets. A two-position pushbutton switch is provided to allow selection between these two inputs.

The XR 1220's easy to use, yet powerful, internal DSP effects processor provides a selection of popular and useable effects. These include reverbs, delays, chorus and parallel reverb/delay. A parameter control allows the settings for each effect to be customised and an internal memory allows effect setting to be saved in user-storage locations for quick recall during a performance.

As I've already mentioned, the XR 1220 also incorporates a 1200 watt power amplifier. This is a Class-D amp, which means it uses 'switch-mode' technology to provide a lot of power for very little weight. The amplifier has two separate outputs, each with a dedicated nine band manual EQ as well as a very useful 'Auto EQ' feature. The Auto EQ performs two different tests on an audio system and then sets EQ filters to improve sound quality and reduce feedback. The first test pushes the system into feedback and then configures notch filters to address the most troublesome feedback frequencies. The second test requires a Peavey PVM 22 or similar microphone to be connected to the dedicated 'RTA' socket. The mixer plays a short burst of 'pink' noise through the speakers, analyses the actual output and then makes EQ adjustments to create the best possible sound for a given room and speaker combination.

The XR 1220 also incorporates Peavey's unique 'Feedback Ferret®' audio processor,

which can be independently activated on each of the two amplified outputs. The processor helps to eliminate feedback by detecting the telltale signs of acoustic feedback and then introducing a notch filter to cut out the audio frequency that is feeding back. The Feedback Ferret® then gradually removes the filters to prevent a long term effect on the overall sound.

Each of the two internal amplifier outputs can be configured in a number of different ways to provide maximum flexibility. Each output is rated at 600 watts and has its own pair of speakon connectors located on the back panel of the mixer. A 'Power Amp Mode' switch is provided to allow selection between five output configurations, pressing and holding this button for a few seconds will advance the unit to the next mode.

The first of these configurations simply routes the left and right master outputs to the two amplifier outputs. This is ideal for small applications where a pair of full range speakers is adequate for the main FOH (Front Of House) sound and no on-stage monitors are required. The second option has the same amplifier configuration, but the internal cross-over is activated with sub-bass frequencies removed from the amplifiers and directed to a dedicated (un-powered) 1/4" jack output. This means that separate dedicated sub amplifier(s) and speaker(s) can be connected while also improving the efficiency of the internal amplifiers for high and mid range frequencies. Although many mixers include a subwoofer output, few actually provide the option to cut the low frequencies from the main speakers when a sub is used.

The third mode sends the first monitor mix to the first amplifier output and a mono main mix (left and right combined) to the second amplifier output. This allows both FOH and stage monitor speakers to be powered by the XR 1220 allowing minimal equipment to be used for small applications. The fourth mode is the same, but again activates the internal cross-over and sub output, allowing a louder system to be created with the addi-

tion of dedicated bass bins and improved efficiency for the mid/tops amps.

The fifth and final configuration routes the first monitor mix to the first amplifier output and the second monitor mix to the second output. This option allows the XR 1220 to be used as part of a larger system with its internal amps dedicated to monitoring while a separate powered P.A. is connected for FOH.

When it comes to connecting external amplifiers or powered speakers a pair of XLR output sockets are provided for the main stereo mix, while separate 1/4" jack sockets are provided for each monitor mix as well as the sub output and effect send. A stereo pair of RCA connectors is also provided as a 'Tape Out' for connecting external recording equipment. A stereo pair of level faders are located in the bottom right corner of the control surface together with dedicated master faders for each monitor mix and also the effects send. AFL (After Fade Listen) buttons are also provided for each monitor mix to allow the operator to listen to what is being sent to each monitor output via their headphones.

If the XR 1220 sounds like the ideal mixer but you're unlikely to need 20 channels then it is worth considering its little brother. The XR 1212 offers exactly the same features, including the amplifier, but with just 12 input channels. The reduction in channels means that it costs a little less (SSP £817.00) and can be housed in a standard 19" rack case.

Both the XR 1212 and the XR 1220 are excellent live PA mixers that offer a great combination of sound quality, usable features and flexibility. Features such as the 'Feedback Ferret®' and 'Auto EQ' will help less experienced sound engineers to achieve better results, while the multiple configurations for the internal amplifier means that the mixers are suited to a range of different applications. If you could find yourself providing sound reinforcement for an intimate wedding ceremony one night and then a large scale live performance the next - the XR series mixers will come in handy for both and a whole host of other situations in between.